

Amendments to the specification

Please replace the Abstract with the following amended abstract:

A method is provided for characterizing objects generated during an initial run of a program, each object being characterized by a number of alternative properties which can be chosen. The method ~~entails~~ includes steps of instrumenting an initial run of program to determine characterization information about each of objects, then determining a desirable property for each object, then determining a correlation between the desirable property and the characterization information for each of ~~said~~ the objects. This correlation is then used to select ~~an~~ a property for an object that is subsequently created during a run of the program based only upon characterization information about the subsequently created object.

Please replace paragraph [0002] with the following amended paragraph:

[0002] The present application is related to the present inventors' applications entitled "Minimizing Interaction Costs Among Components Of Computer Programs" Ser. No. 10/073,628 (IBM Docket YOR920020022), and "Program Components Having Multiple Selectable Implementations" Ser. No. 10/073,630 (IBM Docket YOR920020023), which were filed on the same day as the present application. These related applications are incorporated herein by reference.

Please replace paragraph [0004] with the following amended paragraph:

[0004] Characterization of objects based on what is known at allocate time to determine what behavior they match from a previous run is not covered very much. But, in the context of garbage collection certain allocation sites have been found to produce data that should be more frequently collected than others in U.S. patent application Ser. No. 10/093,656 (IBM

docket YOR920010284) by Shuf et al., entitled "A Method For Efficient Memory Management Based On Object Types".

Please replace paragraph [0010] with the following amended paragraph:

[0010] d) using that correlation to select ~~an~~ a property for an object that is subsequently created during an at least partial run of the program based upon characterization information about the subsequently created object.

Please replace paragraph [0011] with the following amended paragraph:

[0011] Preferably, the determining of a desirable property in step (b) is carried out by minimizing total cost of interaction among components during at least a partial run of the program. This may be done by using the minimization and OAG (Object Affinity Graph) graph cutting techniques of our U.S. patent application Ser. No. _____ 10/073,628 (IBM Docket YOR920020022) and three U.S. patent application Ser. Nos. 09/676,423 by Rajan et al, 09/676,424 by Wegman et al, and 09/676,425 by Roth et al, all filed on Sep. 29, 2000. It may also be determined in other ways, as by assessing the costs of a particular property without referring to interaction costs, For example, the cost of an insert into a tree is more than the cost of an insert into a hash table. Preferably, one should take into account both types of cost.